

CLAIMS

1. A split rim for a tire comprising a one-side rim section on which a one-side bead portion of a pneumatic tire is seated and which has a cylindrical portion in the approximately cylindrical shape
5 projecting inward in the axial direction, the other-side rim section on which the other-side bead portion of said pneumatic tire is seated and which has a cylindrical portion in the approximately cylindrical shape projecting inward in the axial direction and inserted into the cylindrical portion of said one-side rim section, a fastening means for
10 fastening said one-side and the other-side rim sections to each other when the cylindrical portions of the one-side and the other-side rim sections are overlaid due to said insertion, and an expanding means for expanding a part of the inner cylindrical portion at said overlaid part outward in the radial direction to bring the inner and the outer
15 cylindrical portions into close contact.
2. A split rim for a tire according to claim 1, wherein said expanding means comprises a piston to be movably inserted into either of the cylindrical portions in the axial direction and having a tapered surface whose thickness is gradually reduced toward the tip end, and a fluid chamber for expanding a part of the inner cylindrical portion by the tapered surface of the piston by having a fluid pressure to act on the piston to move it toward the tip end when a fluid is supplied.
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3. A split rim for a pneumatic tire according to claim 1 or 2, wherein said fastening means is provided on either of the one-side rim section or the other-side rim section with an equal distance from the rotation center and comprises a shaft body extending toward the other remaining rim section in the axial direction, a plurality of fastening shafts made of projections projected outward from the shaft body, and a plurality of penetrating fastening holes formed on the other
25 remaining rim section with an equal distance from the rotation center and made of a large hole portion through which said projections can pass in the axial direction and an arc portion extending from each of the large hole portions toward the one side in the circumferential
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direction and having the width which is the same as or larger than the shaft body and smaller than the projections.

4. A split rim for a pneumatic tire according to any one of claims 1 to 3, wherein said fastening means can fasten the one-side rim section and the other-side rim section at a plurality of positions in the axial direction.

5. A split rim for a pneumatic tire according to claim 3, wherein a plurality of projections are provided equally spaced from each other on said shaft body in the axial direction so that the one-side rim section and the other-side rim section can be fastened at a plurality of axial positions.

10. A method of assembling a rim/tire assembly comprising a process of overlaying cylindrical portions of a one-side and the other-side rim sections by seating a one-side bead portion of a pneumatic tire on the one-side rim section and the other-side bead portion on the other side rim section as well as by inserting the cylindrical portion in the approximately cylindrical shape of the other-side rim section projecting inward in the axial direction into the cylindrical portion in the approximately cylindrical shape of the one-side rim section 15 projecting inward in the axial direction, and a process of bringing the cylindrical portions on the inner and the outer sides into close contact by fastening said one-side and the other-side rim sections to each other with a fastening means and expanding a part of the inner cylindrical portion in the overlaid part outward in the radial direction with an 20 expanding means.

25. A method for installing a rim/tire assembly comprising a process of conveying a rim/tire assembly made of a pneumatic tire, a one-side rim section on which a one-side bead portion of the pneumatic tire is seated, and the other-side rim section on which the other-side bead portion of said pneumatic tire is seated and which is detachably coupled to the one-side rim section onto a member to be attached, and a process to attach and fix said conveyed rim/tire assembly to a predetermined position of the member to be attached 30

with an attaching means as well as to have a first fluid passage formed in the member to be attached to communicate to a second fluid passage formed in the rim/tire assembly and to introduce a fluid between the one-side and the other-side rim sections and the pneumatic tire through
5 the first and the second fluid passages.

8. A device for installing a rim/tire assembly comprising a conveying means for conveying a rim/tire assembly made of a pneumatic tire, a one-side rim section on which a one-side bead portion of the pneumatic tire is seated, and the other-side rim section
10 on which the other-side bead portion of said pneumatic tire is seated and which is detachably coupled to said one-side rim section into a member to be attached, an attaching means for attaching/fixing said conveyed rim/tire assembly to a predetermined position of the member to be attached, and a second fluid passage formed in the rim/tire
15 assembly for introducing a fluid from a first passage between the one-side and the other-side rim sections and the pneumatic tire when being made to communicate to the first fluid passage formed in the member to be attached.

9. A device for installing a rim/tire assembly according to
20 claim 8, wherein tapered surfaces with the same tapering angle and capable of surface contact with each other are formed on a contact portion between the attached/fixed rim/tire assembly and the member to be attached, respectively, and a force applying means is provided for applying a press-contact force to press these tapered surfaces into
25 contact with each other.

10. A device for installing a rim/tire assembly according to claim 8 or 9, wherein an opening/closing valve is provided in said second fluid passage, and an opening member is provided on the member to be attached for switching said opening/closing valve to an
30 open state when said rim/tire assembly is attached/fixed to the member to be attached.

11. A device for installing a rim/tire assembly according to any one of claims 8 to 10, wherein said installing means is provided with a

holder provided on the member to be attached and to which a coupling portion of the rim/tire assembly can be inserted, a ball to be inserted into each of a plurality of ball holes formed on the holder and having the diameter larger than the thickness of the holder, a slider slidably fitted on the outside of the holder and pressing the ball inward, when the inner surface is engaged with the ball, and a recess formed on the outer surface of said coupling portion to which a part of the ball can be inserted when the ball is pressed inward.

12 A device for installing device a rim/tire assembly according
10 to any one of claims 8 to 11, wherein a positioning means is provided
for positioning/fixing positions in the rotating direction of said
rim/tire assembly and the member to be attached.